

ABSTRACT

[0028] A method and architecture for homogenizing light generated from a flashlight to produce a uniform pattern of light for projection onto an object. The pattern of light is uniform in brightness. Some embodiments produce a pattern of light with a very sharp edge defining the shape of the pattern. A light modifying component can be used to manipulate the pattern of light into particular shapes and images. In one embodiment, a flashlight light source projects light into a light pipe. The light is homogenized as it travels along the light pipe. The light exits the light pipe with a more uniform intensity than when it entered. The light exiting the light pipe is then reimaged by a lens onto an object. Yet in other embodiments, one or more lens arrays having two or more lenlets are used to homogenize the light originating from the light source.

10